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10/006,411	12/03/2001	Franklin Zhigang Zhang		3112

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Franklin ZhiGang Zhang
4717 Spencer Street
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04/27/2007

EXAMINER

ABELSON, RONALD B

ART UNIT	PAPER NUMBER
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2616

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/006,411

Applicant(s)

ZHANG, FRANKLIN ZHIGANG

Examiner

Ronald Abelson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 28-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 28-30, 32, 34-37, 40, 42 and 43 is/are rejected.
- 7) ☒ Claim(s) 31, 33, 38, 39 and 41 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 3/3/06 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

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Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 28 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The phrases, "joint communication" on line 15 and "joint the server" are ambiguous.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claim 28 - 30 and 35 are rejected under 35 U.S.C. 102(e) as being anticipated by Dowling (US 20050170824).

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Regarding claim 28, Dowling teaches one server means (fig. 1 box 125) running on Internet (fig. 1 box 122), a plurality of wireless Access Points (APs) with Internet connection (fig. 1 see antenna connecting antenna 110 to box 115, first antenna 110 used to maintain a first network connection 112, [0027]), providing wireless networking access, a plurality of Personal Mobile Access Device (PMAD) (fig. 1 box 105, mobile unit 105 may be a hand-held cellular phone or wireless data device, [0026]) with wireless networking capability for getting wireless Internet access via said AP, and client operation function means corresponding with said serve means (mobile unit 105 leaves subnetwork, system level handoff assisted by server 125 is needed, [0034]). The examiner corresponds the applicant's client operation function to the mobile's ability to maintain a connection during handoff.

Dowling teaches whereby the APs communicating with the server means via Internet (fig. 1 see connection antenna connected to 112 to 115 to 120 to 122).

Dowling teaches wherein said PMAD is personal mobile communication device with user and media interfaces (fig. 1 box 105, mobile unit 105 may be a hand-held cellular phone or

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wireless data device, [0026]), and wireless networking means to communicate with said APs.

Dowling teaches whereby the PMAD access Internet wirelessly through the AP (fig. 1 box 120, 122, packet transport interface is coupled to network such as Internet, [0027]) and communicate with the server means via Internet (mobile unit 105 leaves subnetwork, system level handoff assisted by server 125 is needed, [0034]).

Dowling teaches wherein the server means enables the PMADs to joint communication (fig. 1 box 105, mobile unit 105 may be a hand-held cellular phone, [0026]) over Internet connection with server means (mobile unit 105 leaves subnetwork, system level handoff assisted by server 125 is needed, [0034]).

Dowling teaches whereby the PMADs access Internet wirelessly through the APs (fig. 1 box 120, 122, packet transport interface is coupled to network such as Internet, [0027]) and joint the server means for communication among each other of the PMADs (mobile unit 105 leaves subnetwork, system level handoff assisted by server 125 is needed, [0034]).

Dowling teaches whereby the server means enables, controls, and guarantees the PMAD to PMAD (fig. 1 box 105, mobile unit 105 may be a hand-held cellular phone, [0026]) communication over Internet without message loss (mobile unit 105 leaves

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subnetwork, system level handoff assisted by server 125 is needed, [0034]). Regarding PMAD to PMAD communication over the Internet, it is clear from fig. 1 that a first mobile 105 unit could communicate with a local wireless access point 150 via the Internet and the local wireless access point could be in communication with a second mobile unit.

Dowling teaches whereby the PMADs communicating with each other (fig. 1 box 105, mobile unit 105 may be a hand-held cellular phone, [0026]) via the server means and Internet (mobile unit 105 leaves subnetwork, system level handoff assisted by server 125 is needed, [0034]).

Regarding claim 30, Dowling teaches a Time Distributed Message Network (TDMN) (fig. 1) including server means (fig. 1 boxes 125, 130, 135) connecting to Internet (fig. 1 box 122) and TDMN operation function means (fig. 1 box 125, 135, mobile unit 105 leaves subnetwork, system level handoff assisted by server 125 is needed, [0034], communication server 135 manages connection for mobile unit, manages network and transport layer mobility and registration and monitors network level aspects of the connection, [0029]).

Dowling teaches a plurality of wireless Access Points (APs) with Internet connection (fig. 1 see antenna connecting antenna

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110 to box 115, first antenna 110 used to maintain a first network connection 112, [0027]), providing wireless networking access.

Dowling teaches a plurality of Personal Mobile Access Device (PMAD) with wireless networking capability (fig. 1 box 105, mobile unit 105 may be a hand-held cellular phone or wireless data device, [0026]) for getting wireless Internet access via said AP, and client operation function means corresponding with said TDMN operation function (mobile unit 105 leaves subnetwork, system level handoff assisted by server 125 is needed, [0034]). The examiner corresponds the applicant's client operation function to the mobile's ability to maintain a connection during handoff.

Dowling teaches whereby the APs communicating with the TDMN via Internet, wherein said PMAD is personal mobile communication device with user and media interfaces, and wireless networking means to communicate with said Aps (fig. 1 box 105, mobile unit 105 may be a hand-held cellular phone or wireless data device, [0026]).

Dowling teaches wherein the TDMN operation function means enables the PMADs to join the TDMN for communication over Internet connection (communication server 135 manages connection

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for mobile unit, manages network and transport layer mobility and registration, [0029]).

Dowling teaches whereby the PMAD access Internet wirelessly through the AP and join the TDMN for communication among each other of the PMADs over Internet (communication server 135 manages connection for mobile unit, manages network and transport layer mobility and registration, [0029]).

Dowling teaches whereby the TDMN and the APs providing communication among the PMADs over Internet, and whereby the TDMN enables, controls, and guarantees the PMAD to PMAD communication over Internet without message lost (mobile unit 105 leaves subnetwork, system level handoff assisted by server 125 is needed, [0034]). Regarding communication among PDADs over the Internet, it is clear from fig. 1 that a first mobile 105 unit could communicate with a local wireless access point 150 via the Internet and the local wireless access point could be in communication with a second mobile unit.

Regarding claims 29 and 35, one of said PMAD can roam among the wireless access of said APs around Internet and communicate with said server means and other PMADs (mobile unit 105 leaves subnetwork, system level handoff assisted by server 125 is needed, [0034]).

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Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 36, 37, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dowling in view of Coppinger (US 6,934,532).

Regarding claim 36, Dowling teaches a Time Distributed Message Network (TDMN) (fig. 1) including server means (fig. 1 boxes 125, 130, 135) connecting to Internet (fig. 1 box 122) and TDMN operation function means (fig. 1 box 125, 135, mobile unit 105 leaves subnetwork, system level handoff assisted by server 125 is needed, [0034], communication server 135 manages connection for mobile unit, manages network and transport layer

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mobility and registration and monitors network level aspects of the connection, [0029])).

Dowling teaches a plurality of wireless Access Points (APs) with Internet connection (fig. 1 see antenna connecting antenna 110 to box 115, first antenna 110 used to maintain a first network connection 112, [0027]), providing wireless networking access.

Dowling teaches a plurality of Personal Mobile Access Device (PMAD) with wireless networking capability (fig. 1 box 105, mobile unit 105 may be a hand-held cellular phone or wireless data device, [0026]) for getting wireless Internet access via said AP, and client operation function means corresponding with said TDMN operation function (mobile unit 105 leaves subnetwork, system level handoff assisted by server 125 is needed, [0034])). The examiner corresponds the applicant's client operation function to the mobile's ability to maintain a connection during handoff.

Dowling teaches whereby the APs communicating with the TDMN via Internet, wherein said PMAD is personal mobile communication device with user and media interfaces, and wireless networking means to communicate with said Aps (fig. 1 box 105, mobile unit 105 may be a hand-held cellular phone or wireless data device, [0026])).

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Dowling teaches wherein the TDMN operation function means enables the PMADs to join the TDMN for communication over Internet connection (communication server 135 manages connection for mobile unit, manages network and transport layer mobility and registration, [0029]).

Dowling teaches whereby the PMAD access Internet wirelessly through the AP and join the TDMN for communication among each other of the PMADs over Internet (communication server 135 manages connection for mobile unit, manages network and transport layer mobility and registration, [0029]).

Dowling teaches whereby the TDMN and the APs providing communication among the PMADs over Internet, and whereby the TDMN enables, controls, and guarantees the PMAD to PMAD communication over Internet without message lost (mobile unit 105 leaves subnetwork, system level handoff assisted by server 125 is needed, [0034]). Regarding communication among PDADs over the Internet, it is clear from fig. 1 that a first mobile 105 unit could communicate with a local wireless access point 150 via the Internet and the local wireless access point could be in communication with a second mobile unit.

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Dowling is silent on a time distributed message process function means for package source data into multiple time distributed message units (TDMU) to communicate over Internet, wherein said TDMU is a base communication message unit of a communication protocol means constructed on top of TCP/IP protocol and Internet, Whereby PMAD doing message communication via Internet and TDMN with TDMU means.

Coppinger teaches (fig. 9 box 907, WXML, WBXML, WAP, WTLS, col. 25 line 8 - col. 26 line 11).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of Dowling by using an application layer protocol that supports wireless technology, i.e. WXML, WBXML, WAP, WTLS, as suggested by Coppinger. This modification can be performed in software. This modification would benefit the system by conforming to the OSI model. This would allow the system to be more easily integrated into larger systems.

Regarding claim 37, Dowling teaches a means to control the communication with TDMN and other PMADs (fig. 1 box 105, 110, mobile unit connected to first antenna to maintain a first network connection, [0027])

Although the combination does not explicitly teach a means

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to convert data resource to be transferred into TDMU and means to convert the received TDMU into original data format, it would have been obvious to one of ordinary skill in the art to do so via encapsulation/decapsulation. This modification can be performed in software. This modification would benefit the system since encapsulation/decapsulation is a reliable method of transferring data across the Internet.

Regarding claim 43, one of said PMAD can roam among the wireless access of said APs around Internet and communicate with said server means and other PMADs (mobile unit 105 leaves subnetwork, system level handoff assisted by server 125 is needed, [0034]).

7. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dowling and as applied to claim 30 above, and further in view of Shao (US 7,093,028).

Dowling is silent on said TDMN manages the communication of said PMADs with different quality of service level.

Shao teaches managing the communication of said PMADs with different quality of service level (Internet, QoS, type of service byte within header, col. 8 lines 12-23).

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Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of Dowling by placing a QoS byte within the packet header, as shown by Shao. This modification can be performed in software. This modification would benefit the system by scheduling packets according to their QoS level.

8. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dowling and as applied to claim 30 above, and further in view of Dinkin (US 6,603,965).

Dowling is silent on the plurality of PMADs can perform group communication.

Like Dowling, Dinkin teaches the Internet. Furthermore, Dinkin teaches a plurality of PMADs can perform group communication (wireless, Internet, conference call, col. 1 line 66 - col. 2 line 5).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of Dowling by performing group communication over the Internet, as shown by Dinkin. This modification would benefit the system by providing for low cost group communication via the Internet.

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9. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Dowling and Coppinger as applied to claim 36 above, and further in view of Shao (US 7,093,028).

The combination is silent on said TDMN manages the communication of said PMADs with different quality of service level.

Shao teaches managing the communication of said PMADs with different quality of service level (Internet, QoS, type of service byte within header, col. 8 lines 12-23).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of the combination by placing a QoS byte within the packet header, as shown by Shao. This modification can be performed in software. This modification would benefit the system by scheduling packets according to their QoS level.

10. Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Dowling and Coppinger as applied to claim 36 above, and further in view of Dinkin (US 6,603,965).

The combination is silent on the plurality of PMADs can perform group communication.

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Like Dowling, Dinkin teaches the Internet. Furthermore, Dinkin teaches a plurality of PMADs can perform group communication (wireless, Internet, conference call, col. 1 line 66 - col. 2 line 5).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of the combination by performing group communication over the Internet, as shown by Dinkin. This modification would benefit the system by providing for low cost group communication via the Internet.

Allowable Subject Matter

11. Claims 31, 33, 38, 39, and 41 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

12. Applicant's arguments with respect to the independent claims have been considered but are moot in view of the new ground(s) of rejection.

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Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald Abelson whose telephone number is (571) 272-3165. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (571) 272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Ronald Abelson
Examiner
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